RADIOGRAPHIC CLASSIFICATION FOR OSTEOCHONDROSIS (OCD) IN THE PRE-HORSE

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Following the criteria recommended by an experts´ committe it was decided to establish a radiographic classification for OCD injuries in the PRE-horse, specifically adapted for every anatomical structure, in order to elminate only the most serious form of the disease (*exclusive forms*).

These classifications give more attention to the changes in the morphology of the articular joint in itself rather than the presence of osteochondral fragments.

There are three established degrees for each anatomical structure, depending on the gravity of the detected lesion. **Horses that show a third degree lesion or at least two lesions of a second degree in the whole of anatomical structure being evaluated, will be considered NOT SUITABLE.**

Novales M, De la Calle J, Prades M, Valdés M. (2008)

CLASSIFICATION OF LESIONS IN THE *DORSAL PORTION OF THE SAGITTAL RIDGE OF THE THIRD METACARPAL/METATARSAL BONES*

In this classification system for the PRE-horse, it is only the dorsal portion of the sagittal ridge wich is being evaluated.

Degree 0.- Smooth and rounded joint surface (bony rounded contour), without osteochondral fragments.

Degree 1.- Smooth joint surface (without sclerosis) or slightly irregular, without osteochondral fragments.

Degree 2.- Flattening of joint surface (with sclerosis) or concavity in the joint surface. In both cases lower or equal to 50% of the total joint surface. It is possible to find osteochondral fragmentes originating in the sagittal ridge.

Degree 3.- A significant concavity in the joint surface, being larger than 50% of the total joint surface. It is possible to find osteochondral fragments originating in the sagittal ridge.

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ANATOMICAL STRUCTURE

Dorsal portion

Palmar or plantar portion

Distal portion

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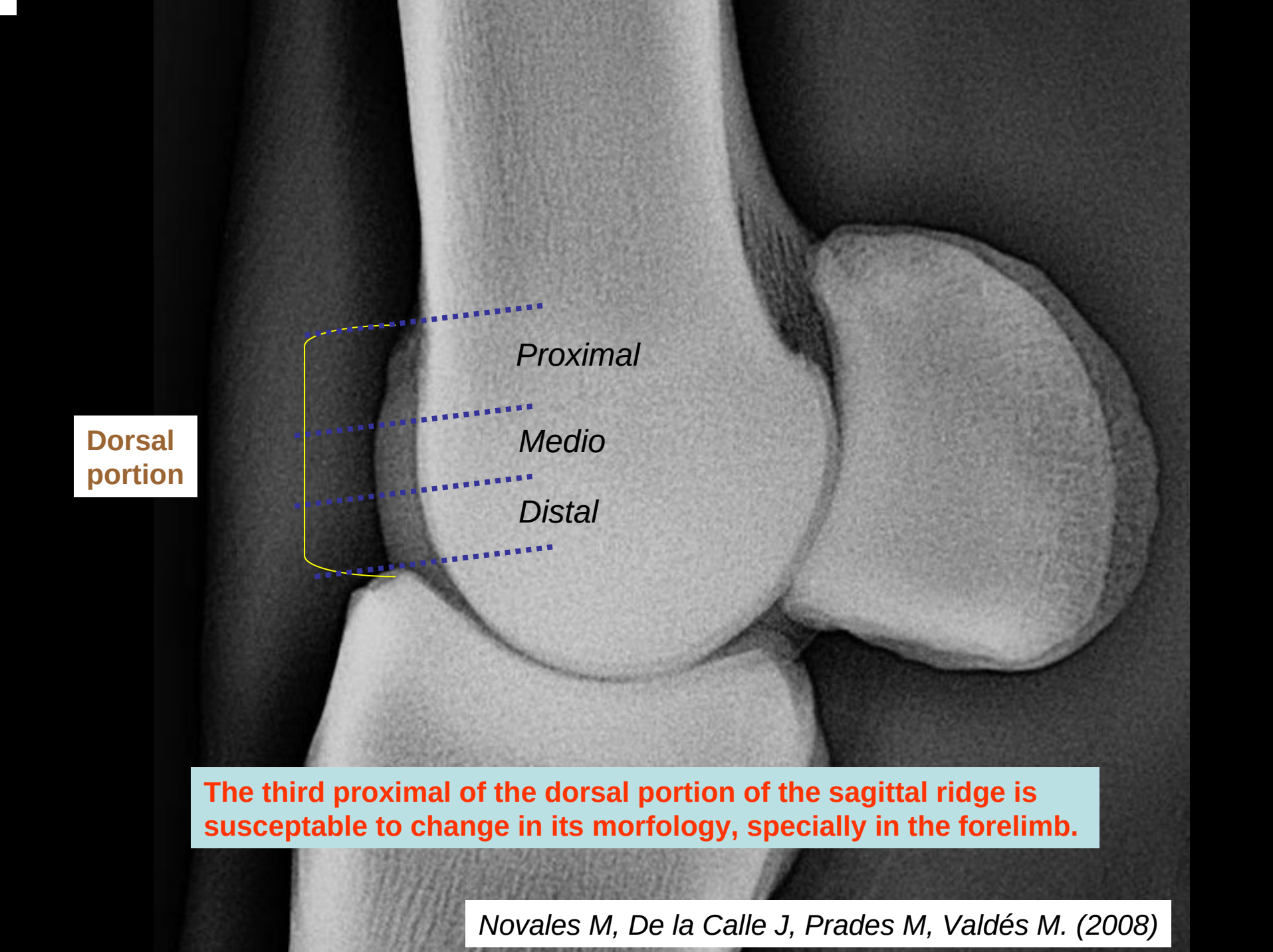
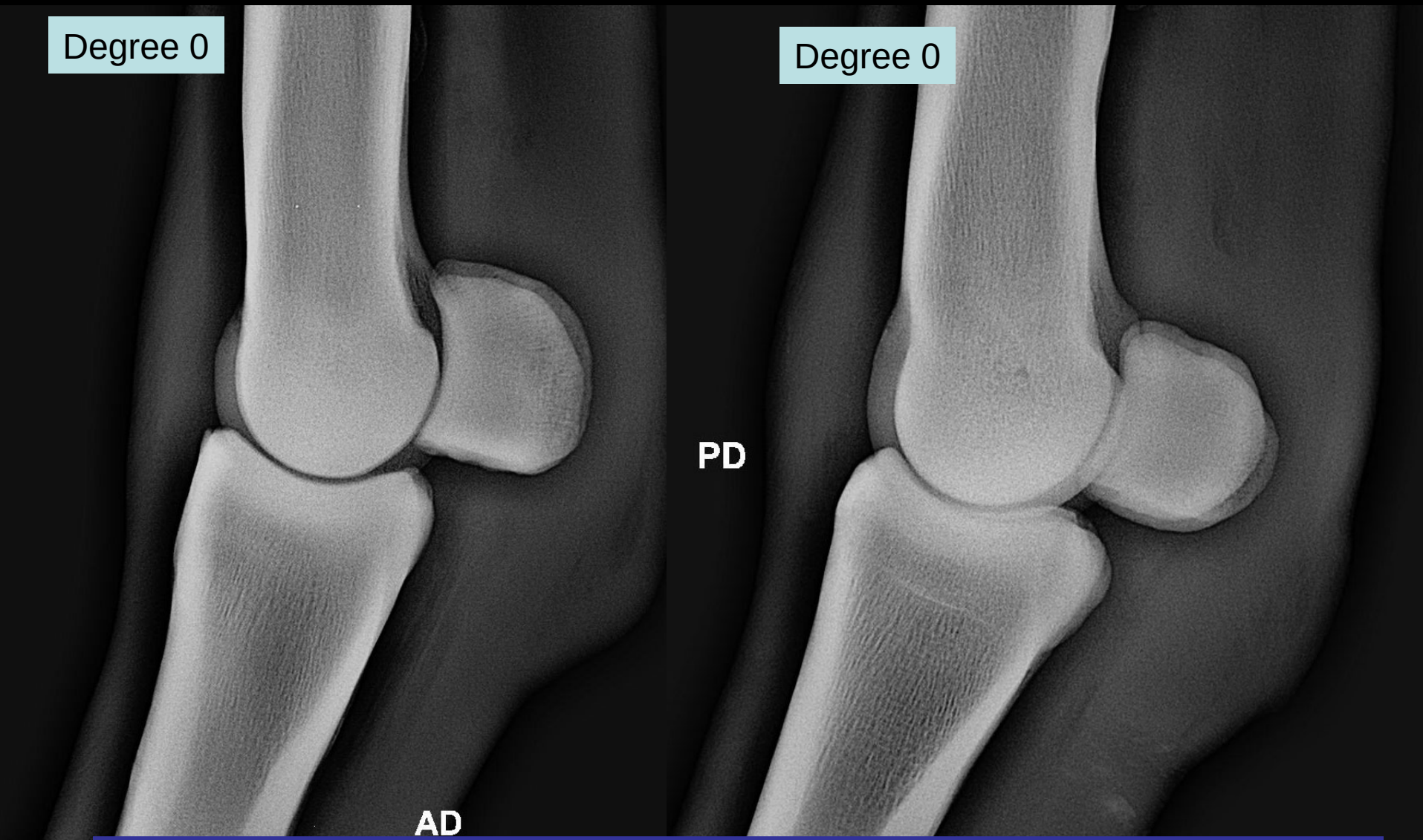


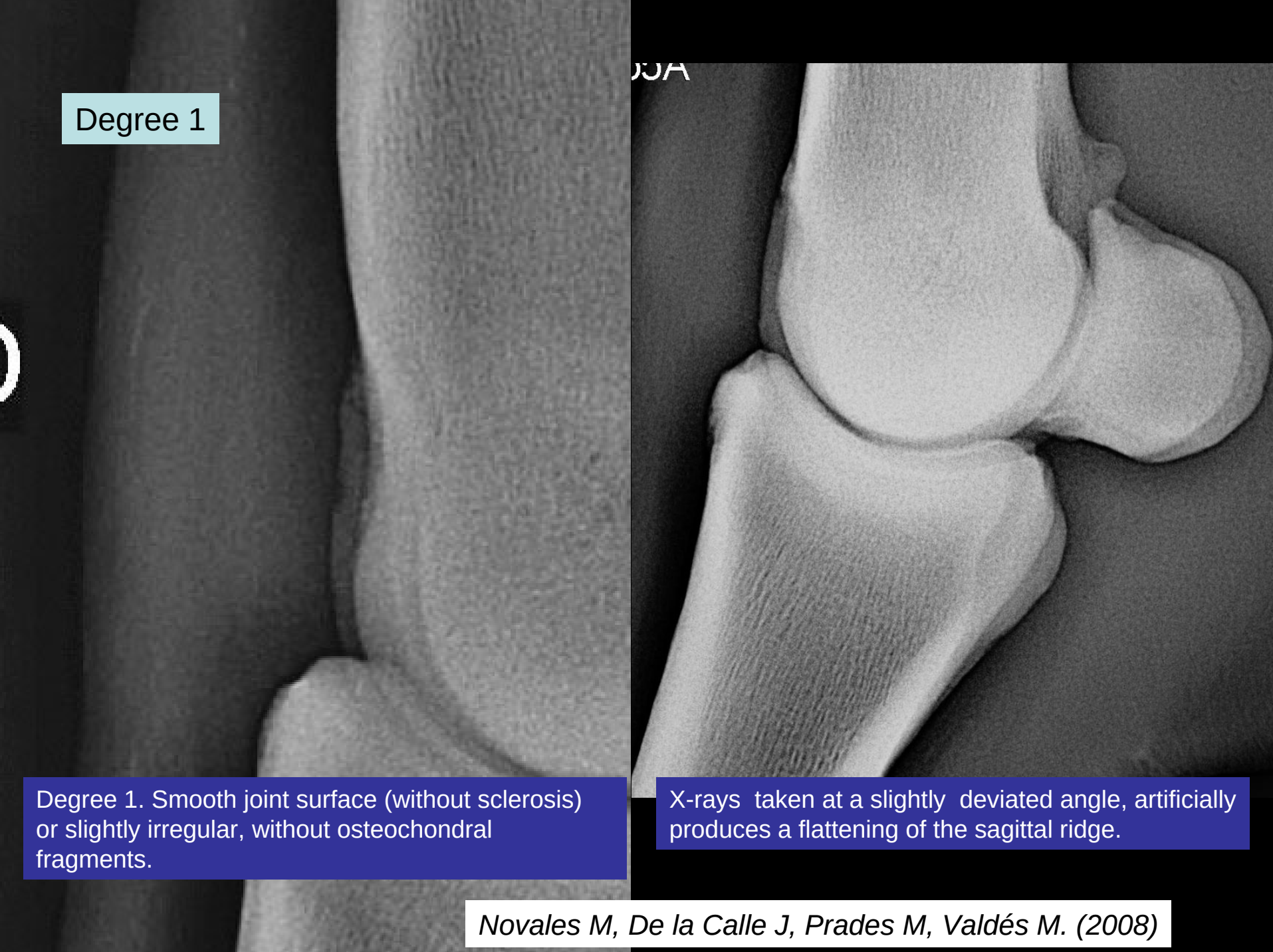
The third proximal of the dorsal portion of the sagittal ridge is susceptable to change in its morfology, specially in the forelimb.

Novales M, De la Calle J, Prades M, Valdés M. (2008)



Degree 0. Smooth and rounded joint surface (bony rounded contour), without osteochondral fragments.

Novales M, De la Calle J, Prades M, Valdés M. (2008)



Degree 1. Smooth joint surface (without sclerosis) or slightly irregular, without osteochondral fragments.

X-rays taken at a slightly deviated angle, artificially produces a flattening of the sagittal ridge.

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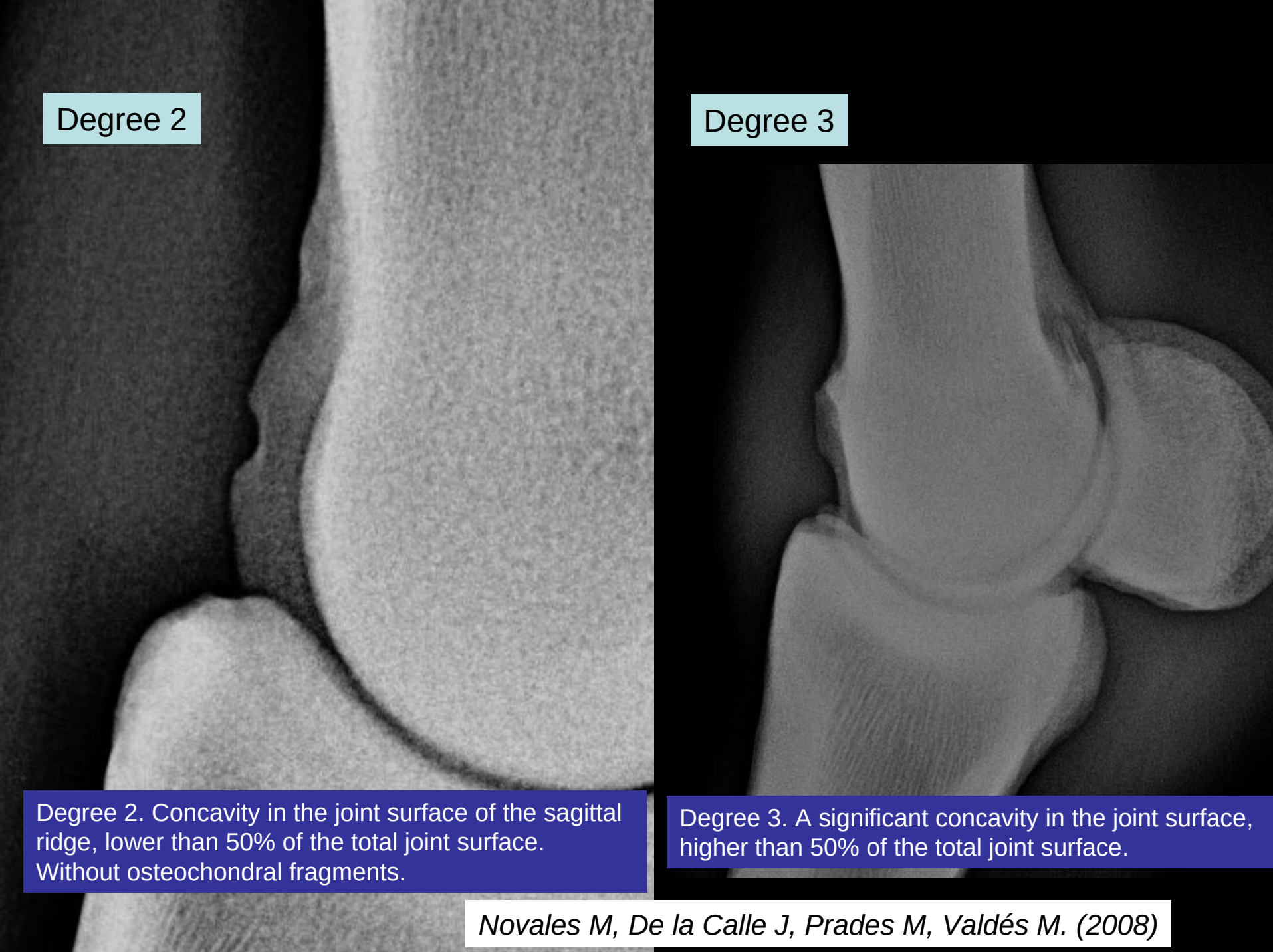
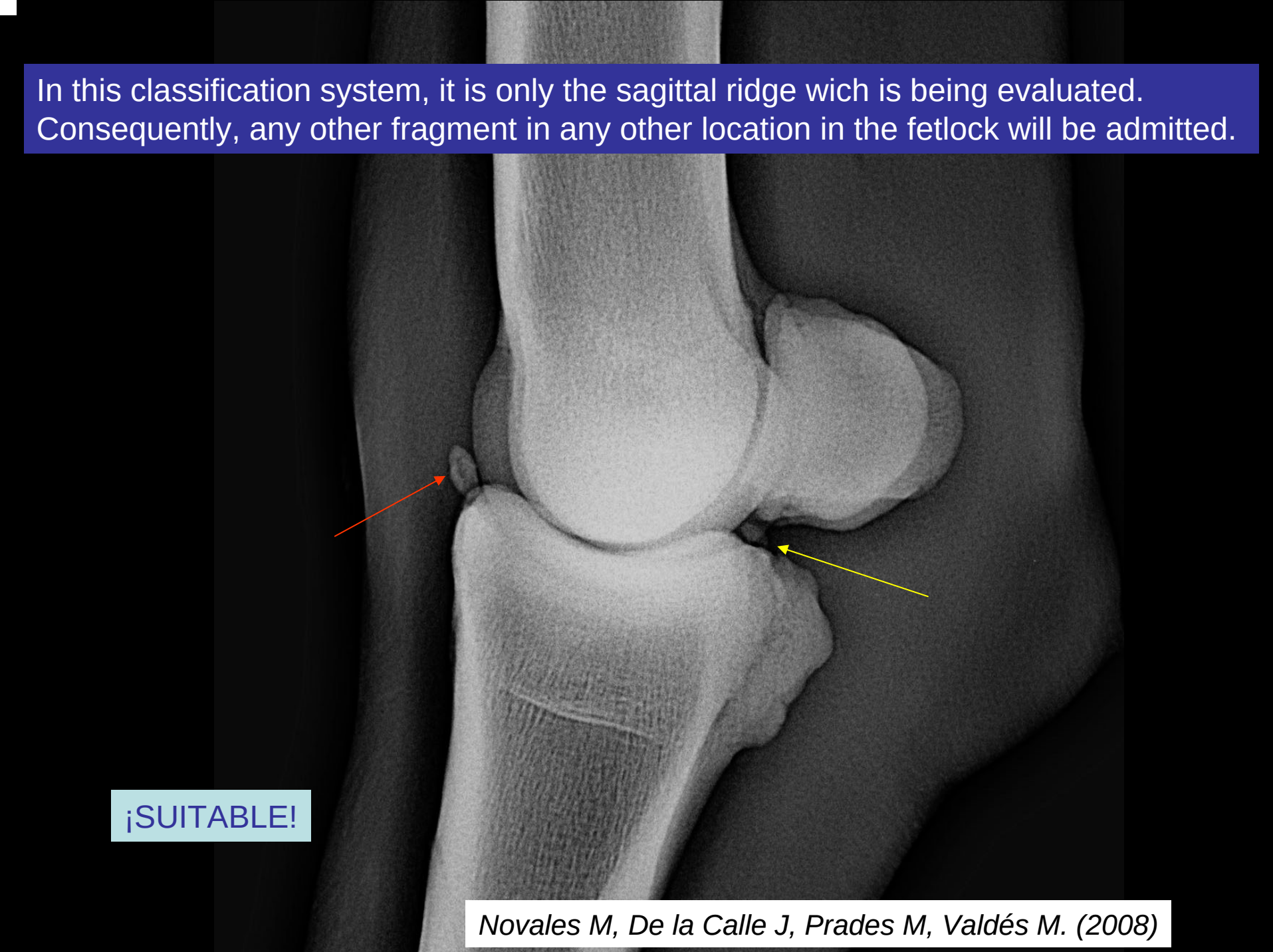
Degree 2. Flattening of joint surface, with sclerosis. In both cases lower than 50% of total joint surface. Without osteochondral fragments.

Novales M, De la Calle J, Prades M, Valdés M. (2008)


Degree 2
Degree 3
Degree 2. Concavity in the joint surface of the sagittal ridge, lower than 50% of the total joint surface. Without osteochondral fragments.
Degree 3. A significant concavity in the joint surface, higher than 50% of the total joint surface.
Novales M, De la Calle J, Prades M, Valdés M. (2008)

In this classification system, it is only the sagittal ridge wich is being evaluated. Consequently, any other fragment in any other location in the fetlock will be admitted.



¡SUITABLE!

Novales M, De la Calle J, Prades M, Valdés M. (2008)

CLASSIFICATION OF LESIONS LOCATED IN THE *DISTAL INTERMEDIATE RIDGE OF THE TIBIA.*

Degree 0.- Smooth and rounded joint surface (bony rounded contour) without osteochondral fragments.

Degree 1.- Smooth joint surface or slightly irregular, without osteochondral fragments.

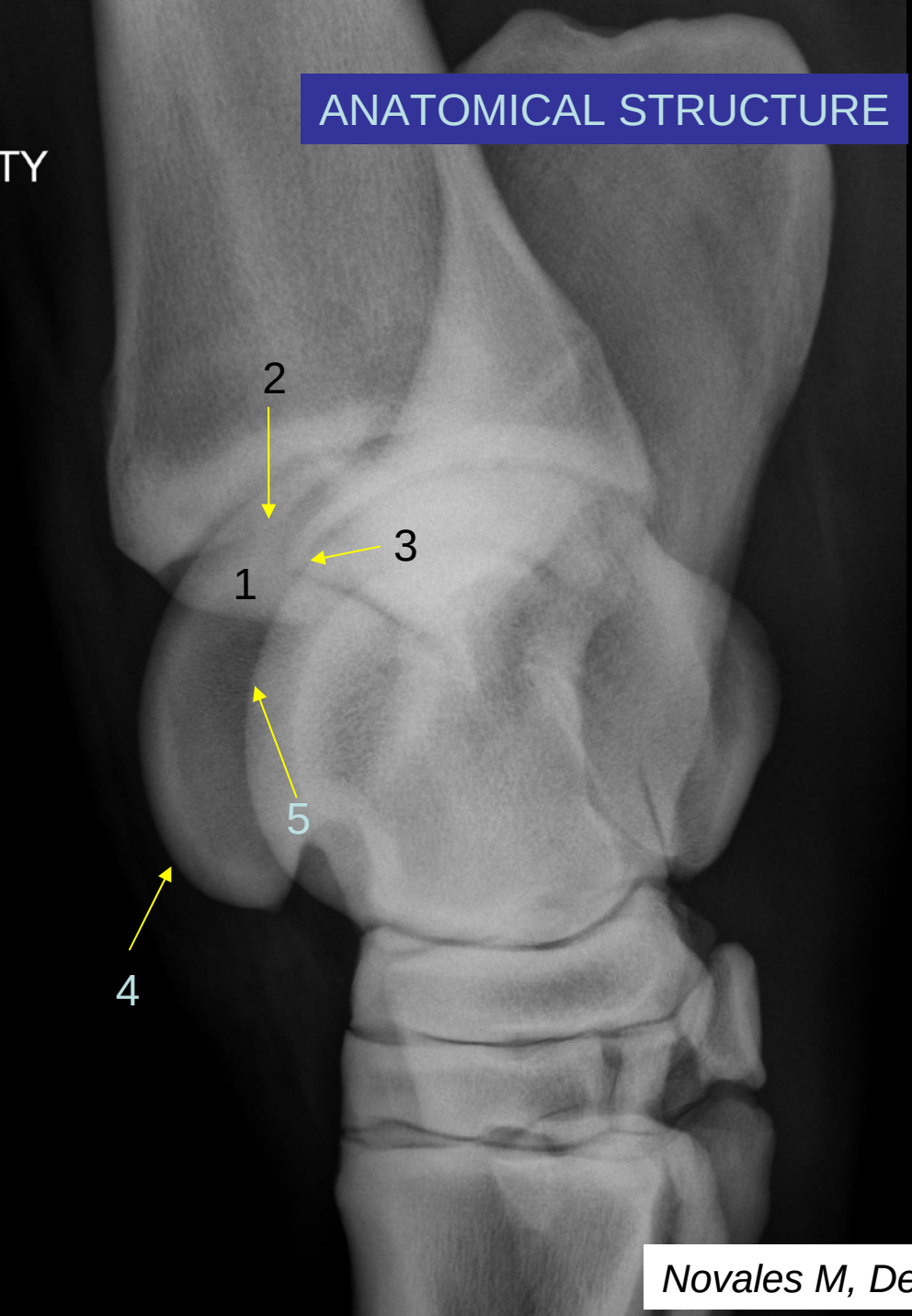
Degree 2.- Small denting (concavity) in the joint surface, inferior or equal to 50% of the total surface being evaluated. It is possible to find osteochondral fragments.

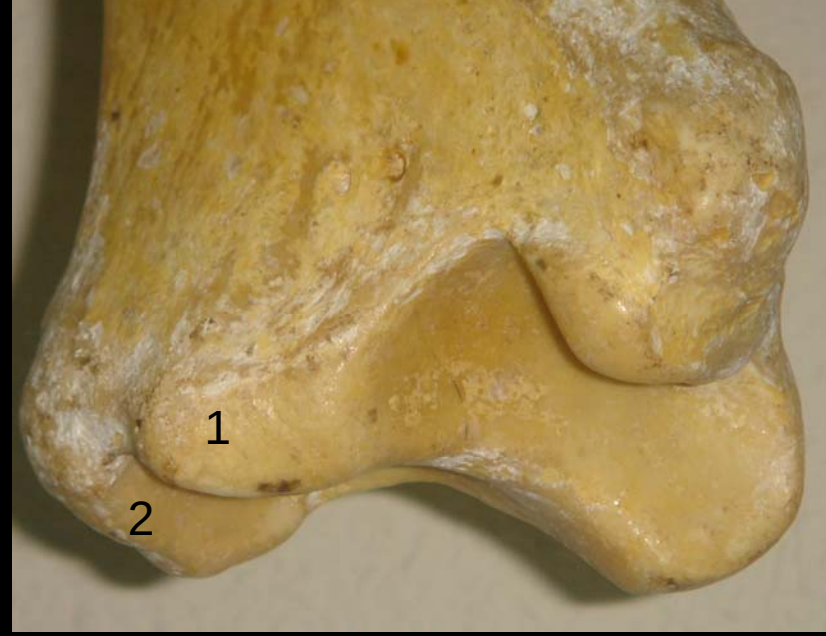
Degree 3.- A significant concavity in the joint surface, being higher than 50% of the total joint surface. It is possible to find osteochondral fragments.

The classification assesment is taken from the dorsomedial-plantarolateral view. The dorsolateral-plantaromedial view helps to see other radiological sign such as: location of fragments, attachment or not to the intermediate ridge of the tibial, inflammation of soft tissues, etc.

Novales M, De la Calle J, Prades M, Valdés M. (2008)

ANATOMICAL STRUCTURE





1.- Distal intermediate ridge of the tibia.

2.- Lateral malleolus of the tibia.

3.- Coracoid process of the calcaneus..

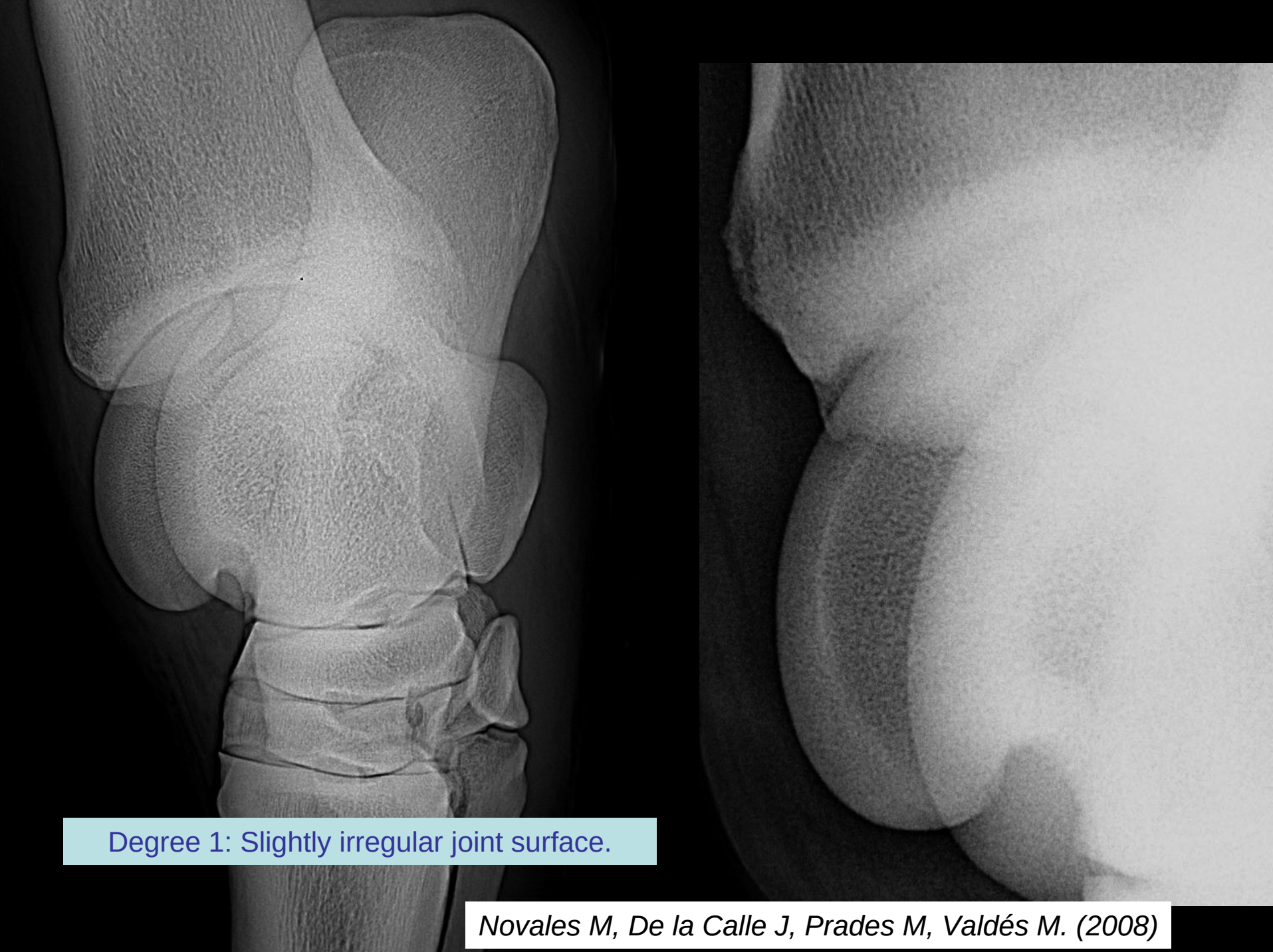
4.- Lateral trochlear ridge of the talus.

5.- Medial trochlear ridge of the talus.

Novales M, De la Calle J, Prades M, Valdés M. (2008)

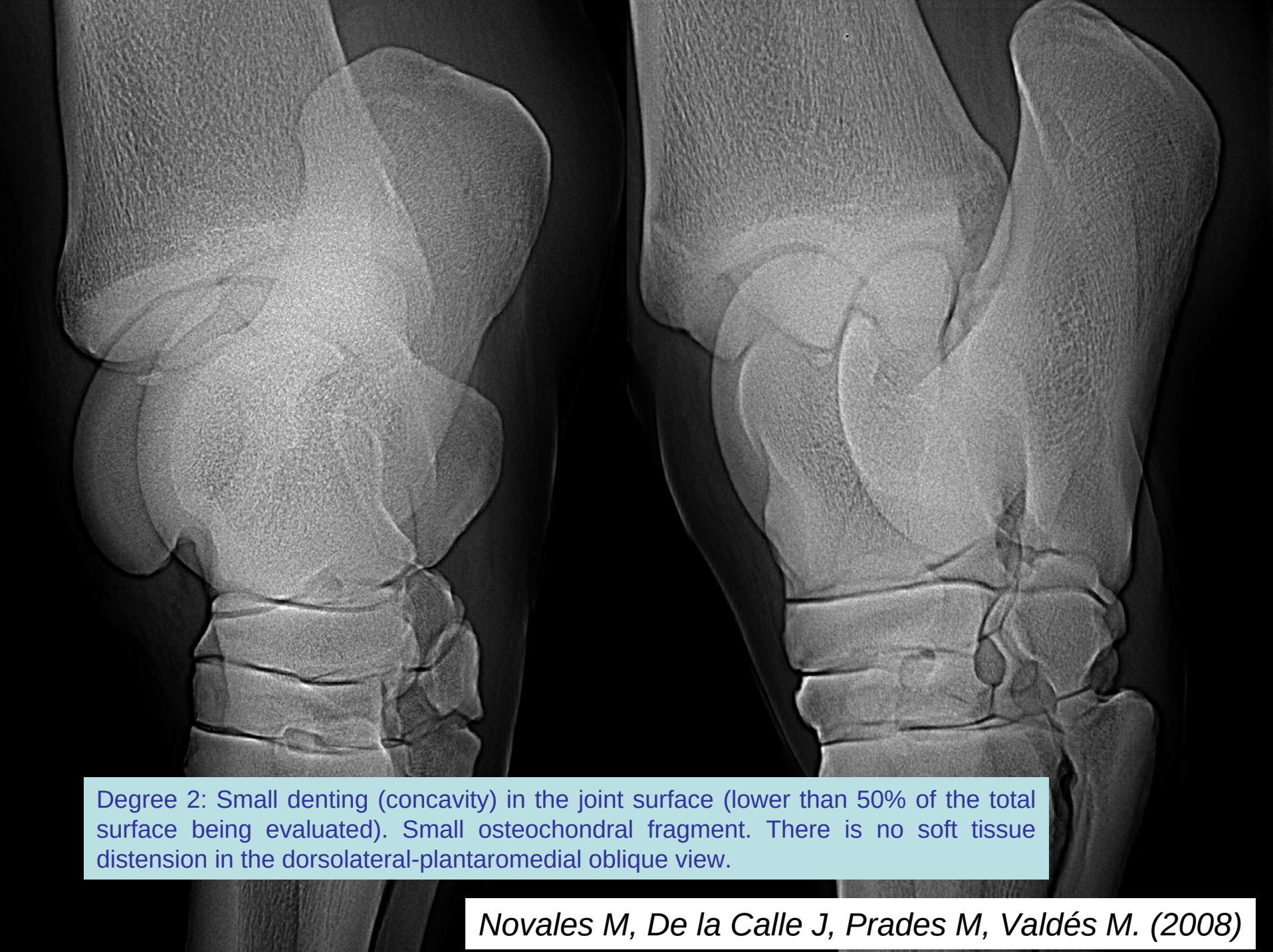
Degree 0: Smooth and rounded joint surface, without osteochondral fragments.

Novales M, De la Calle J, Prades M, Valdés M. (2008)



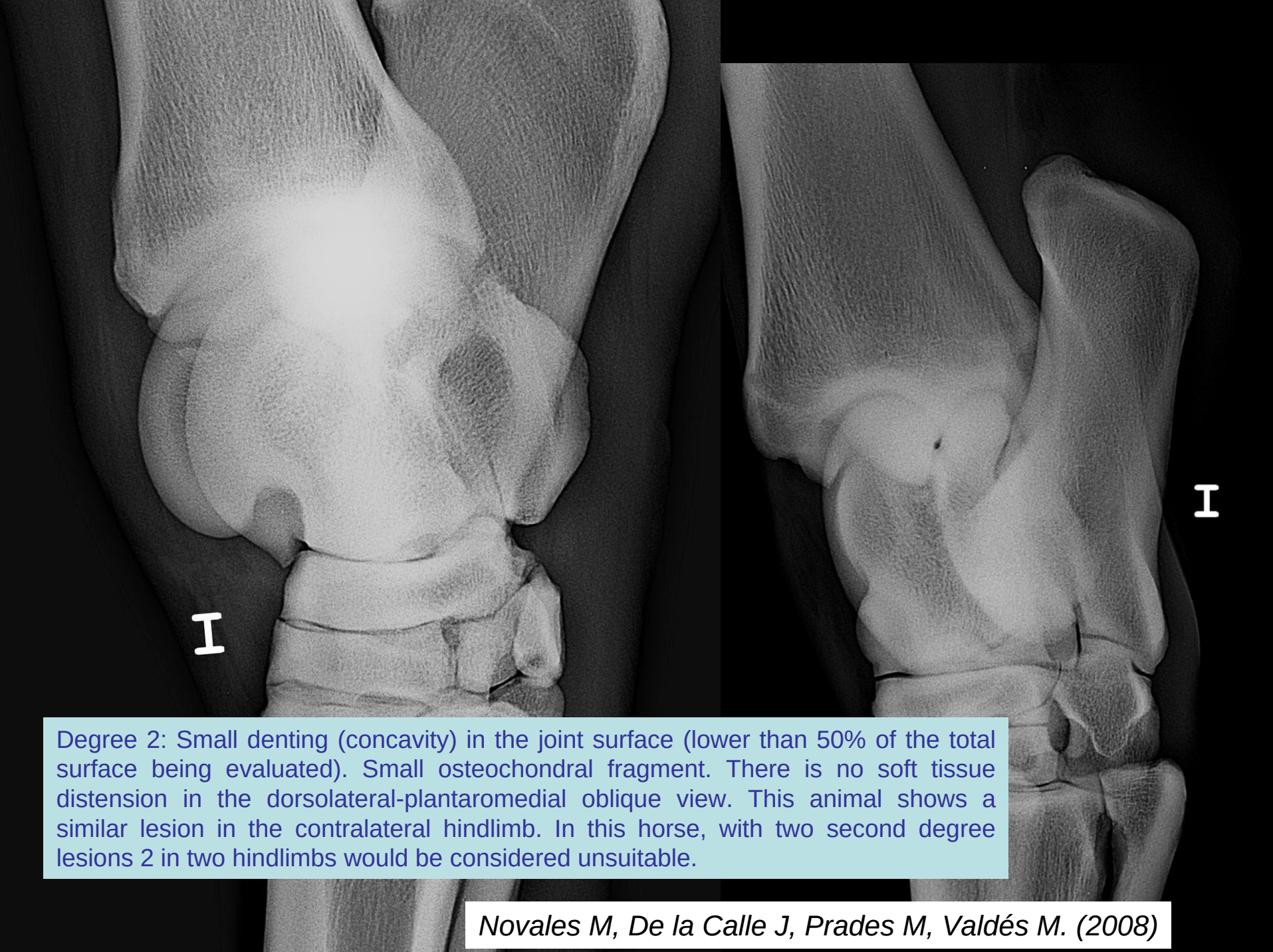
Degree 1: Slightly irregular joint surface.

Novales M, De la Calle J, Prades M, Valdés M. (2008)



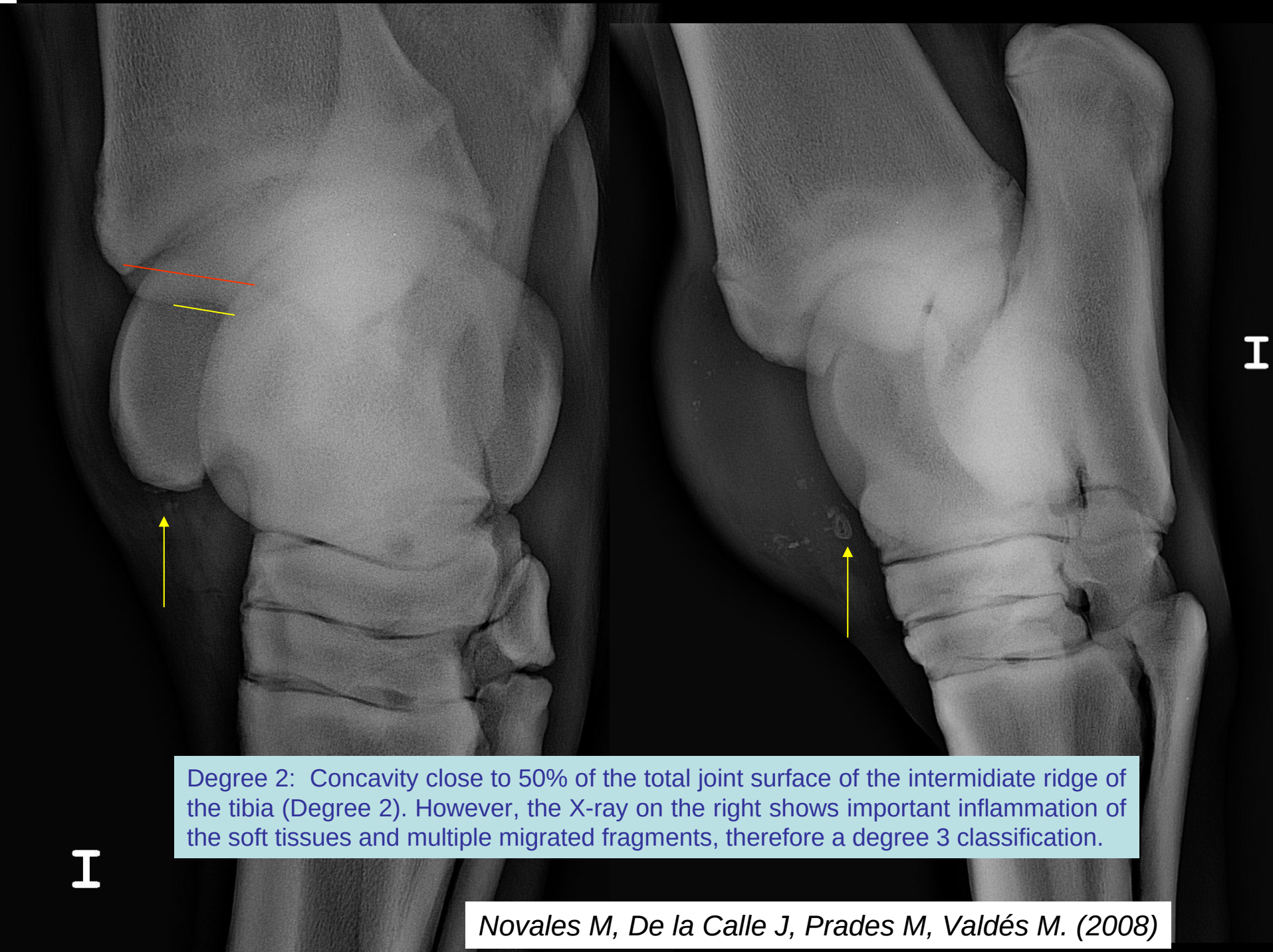
Degree 2: Small denting (concavity) in the joint surface (lower than 50% of the total surface being evaluated). Small osteochondral fragment. There is no soft tissue distension in the dorsolateral-plantaromedial oblique view.

Novales M, De la Calle J, Prades M, Valdés M. (2008)



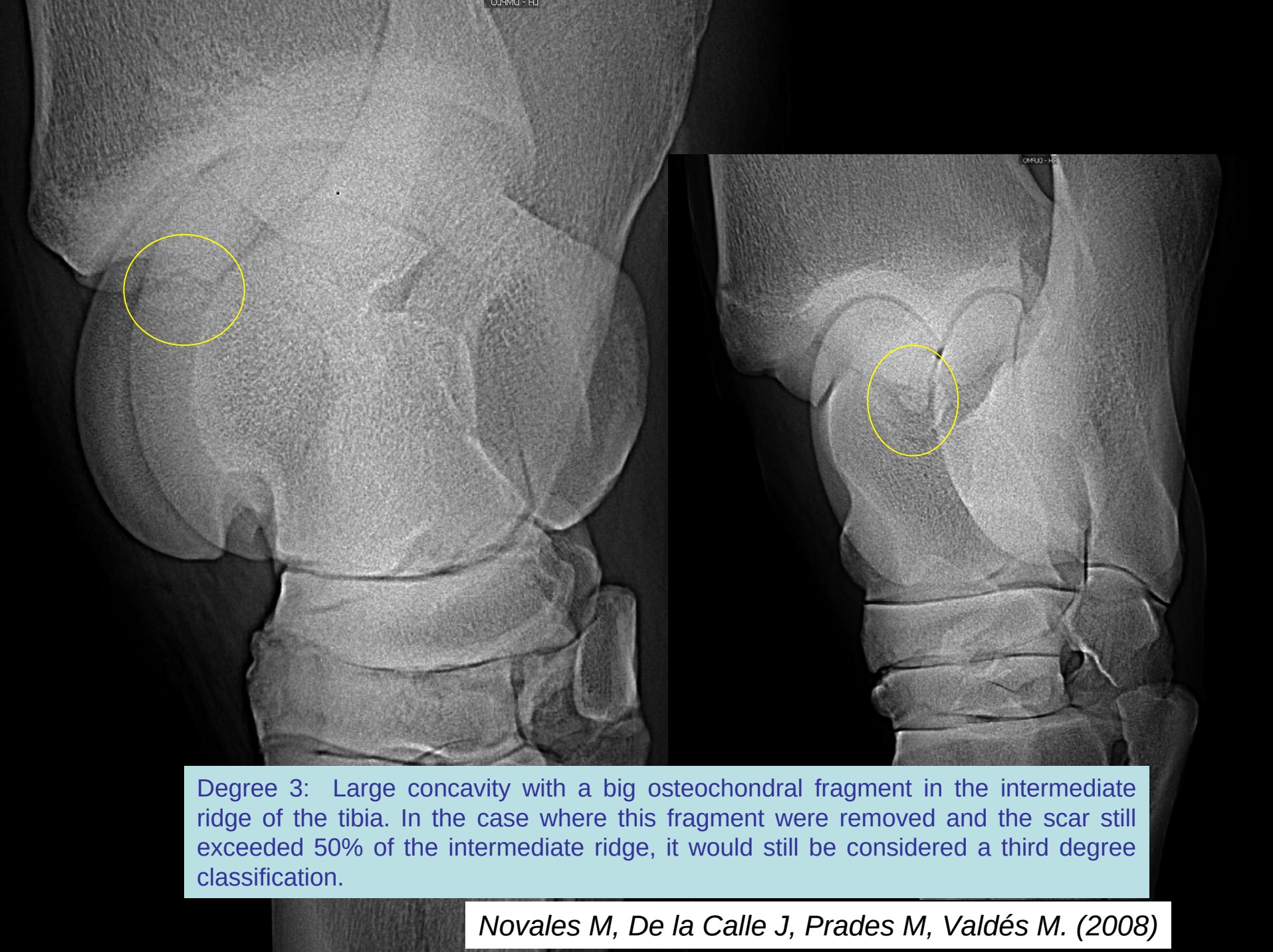
Degree 2: Small denting (concavity) in the joint surface (lower than 50% of the total surface being evaluated). Small osteochondral fragment. There is no soft tissue distension in the dorsolateral-plantaromedial oblique view. This animal shows a similar lesion in the contralateral hindlimb. In this horse, with two second degree lesions 2 in two hindlimbs would be considered unsuitable.

Novales M, De la Calle J, Prades M, Valdés M. (2008)



Degree 2: Concavity close to 50% of the total joint surface of the intermidiate ridge of the tibia (Degree 2). However, the X-ray on the right shows important inflammation of the soft tissues and multiple migrated fragments, therefore a degree 3 classification.

Novales M, De la Calle J, Prades M, Valdés M. (2008)



Degree 3: Large concavity with a big osteochondral fragment in the intermediate ridge of the tibia. In the case where this fragment were removed and the scar still exceeded 50% of the intermediate ridge, it would still be considered a third degree classification.

Novales M, De la Calle J, Prades M, Valdés M. (2008)

CLASSIFICATION OF LESIONS LOCATED IN THE *MEDIAL MALLEOLUS OF THE TIBIA*.

Any lesion located in this area will be considered as a second degree injury.

Note: In this system, lesions in the *lateral maleollus of the tibia* are not evaluated, due to the limited number of views taken of the hock.

Any OCD located in the lateral maleollus of the tibia will be admitted.

Novales M, De la Calle J, Prades M, Valdés M. (2008)

CLASSIFICATIONS OF THE LESIONS LOCATED IN THE *MEDIAL AND LATERAL RIDGES OF THE TROCHLEAR TALI.*

Degree 0.- Rounded joint surface, without osteochondral fragments.

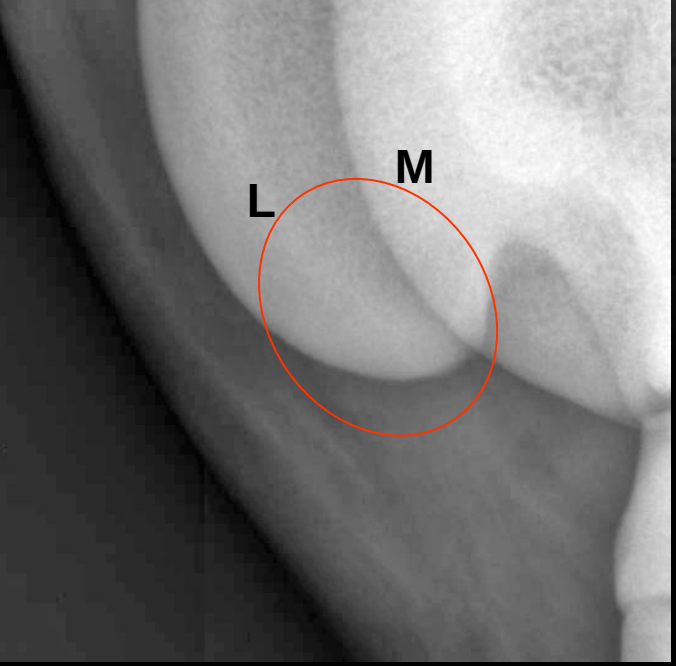
Degree 1.- Smooth joint surface (flattening) (without sclerosis) or slightly irregular, without osteochondral fragments.

Degree 2.- Flattened joint surface or irregularity with osteochondral fragments

Degree 3.- Irregularity in the joint surface, with osteochondral fragments. It is also considered a third degree if any defect in the ossification of the inside bone is seen.

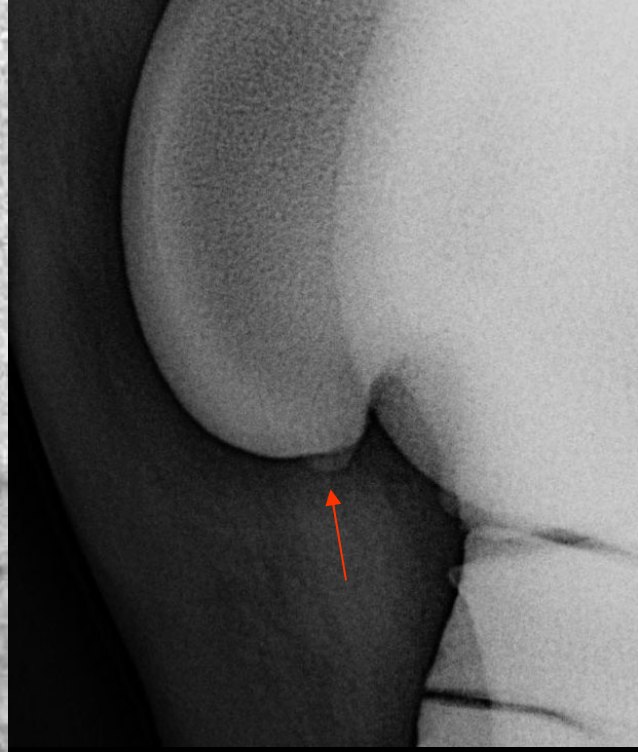
Note: Small osseous fragments in the more distal portion of the medial trochlear ridge of the talus will be considered a normal anatomical variation.

Novales M, De la Calle J, Prades M, Valdés M. (2008)



Degree 0

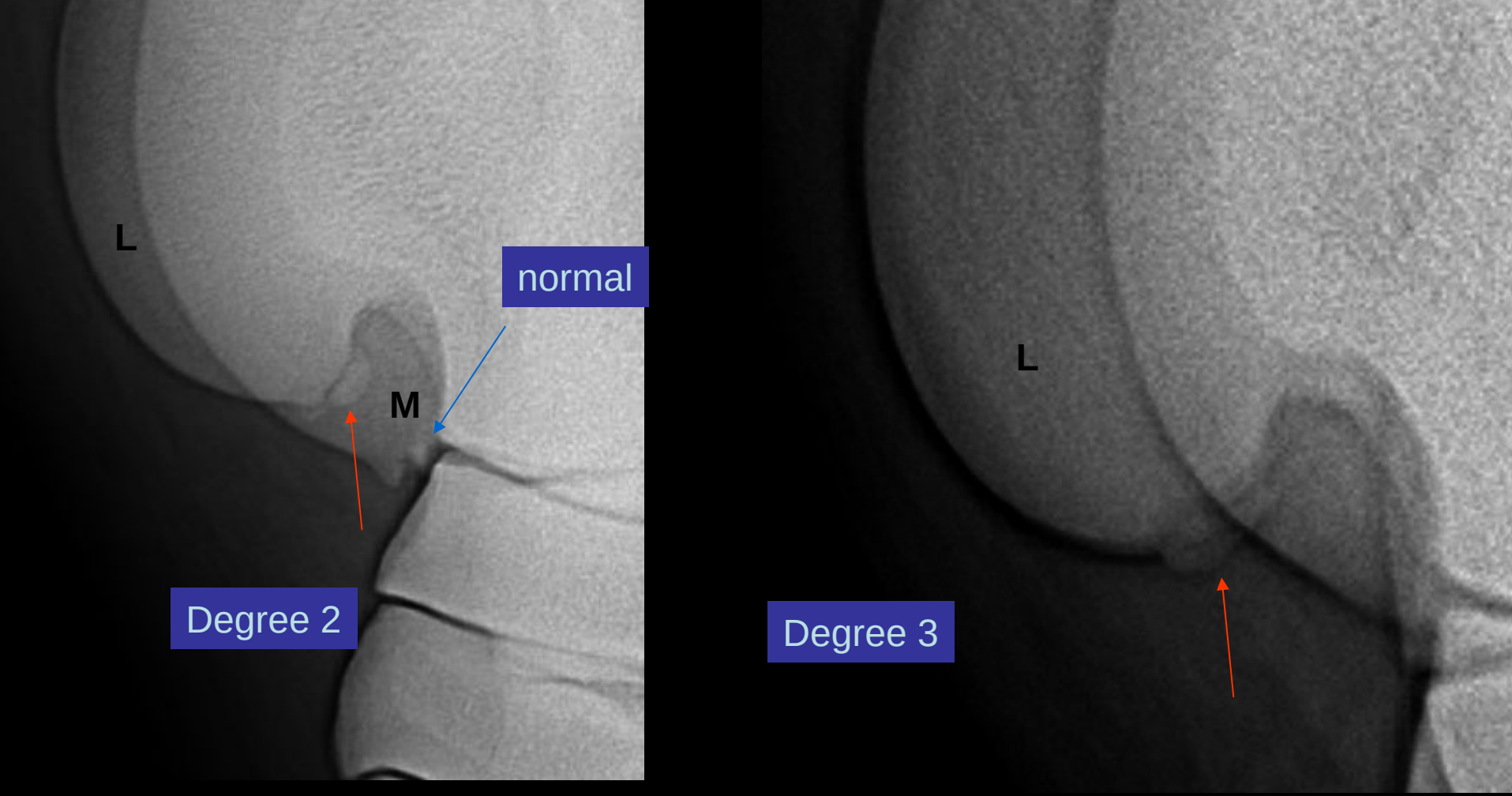
Degree 1



Degree 2

Degree 0: Rounded joint surface, without osteochondral fragments.
Degree 1: Smooth joint surface (flattening). Without osteochondral fragments.
Degree 2: Flattened joint surface with osteochondral fragment

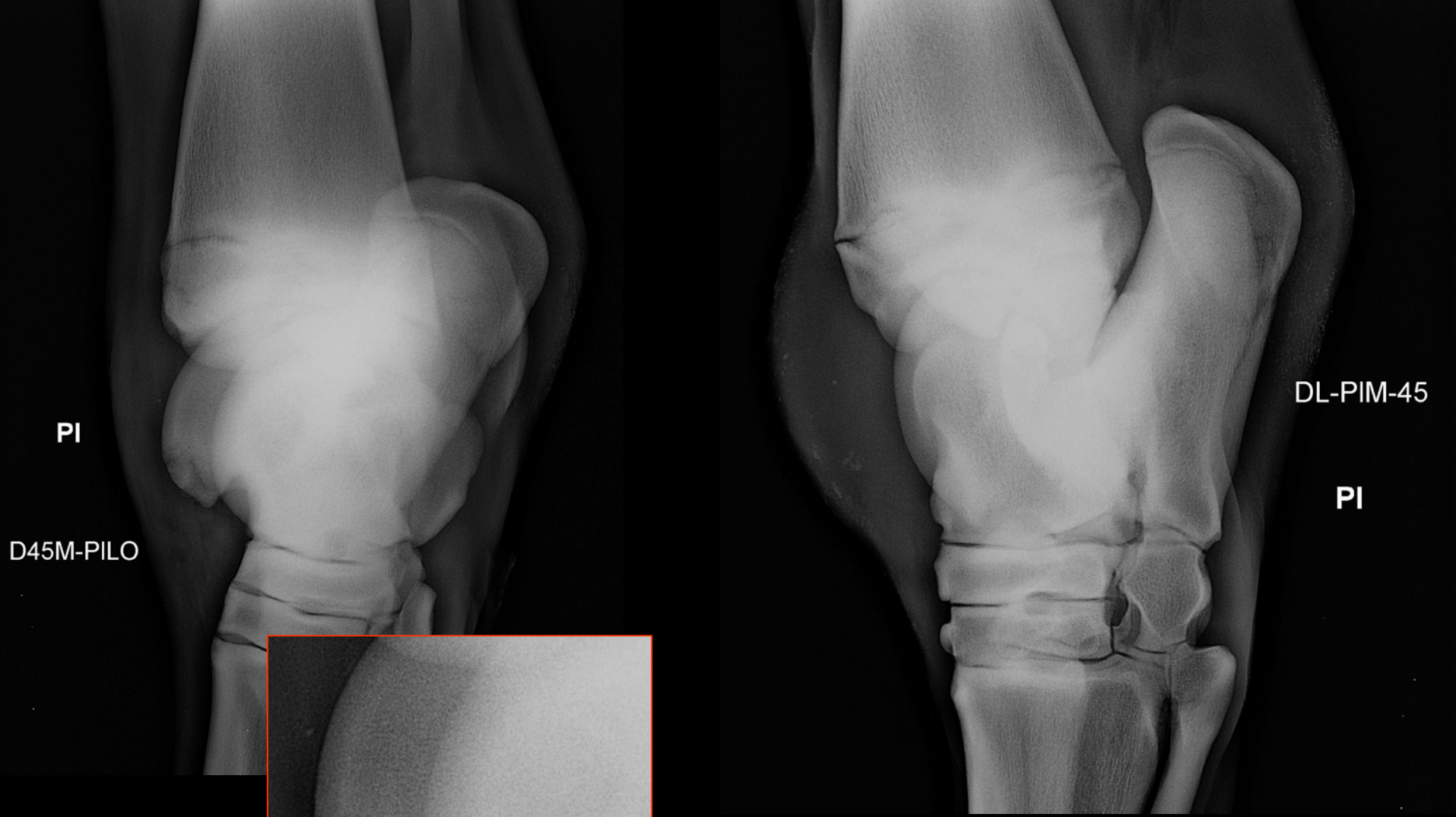
Novales M, De la Calle J, Prades M, Valdés M. (2008)



Degree 2: Flattened joint surface or irregularity with osteochondral fragments.
Degree 3: Irregularity in the joint surface, with osteochondral fragments.

Note: Small osseous fragments in the more distal portion of the medial trochlear ridge of the talus (M) will be considered a normal anatomical variation.

Novales M, De la Calle J, Prades M, Valdés M. (2008)



LATERAL TROCHLEAR RIDGE OF THE TALUS

Degree 3: Lysis in the subcondral bone with osteochondral fragments. .

Novales M, De la Calle J, Prades M, Valdés M. (2008)

CLASSIFICATION OF THE LESIONS IN THE *MEDIAL AND LATERAL TROCHLEAR RIDGE OF THE FEMUR.*

Degree 0.- Rounded and smooth joint surface, without osteochondral fragments.

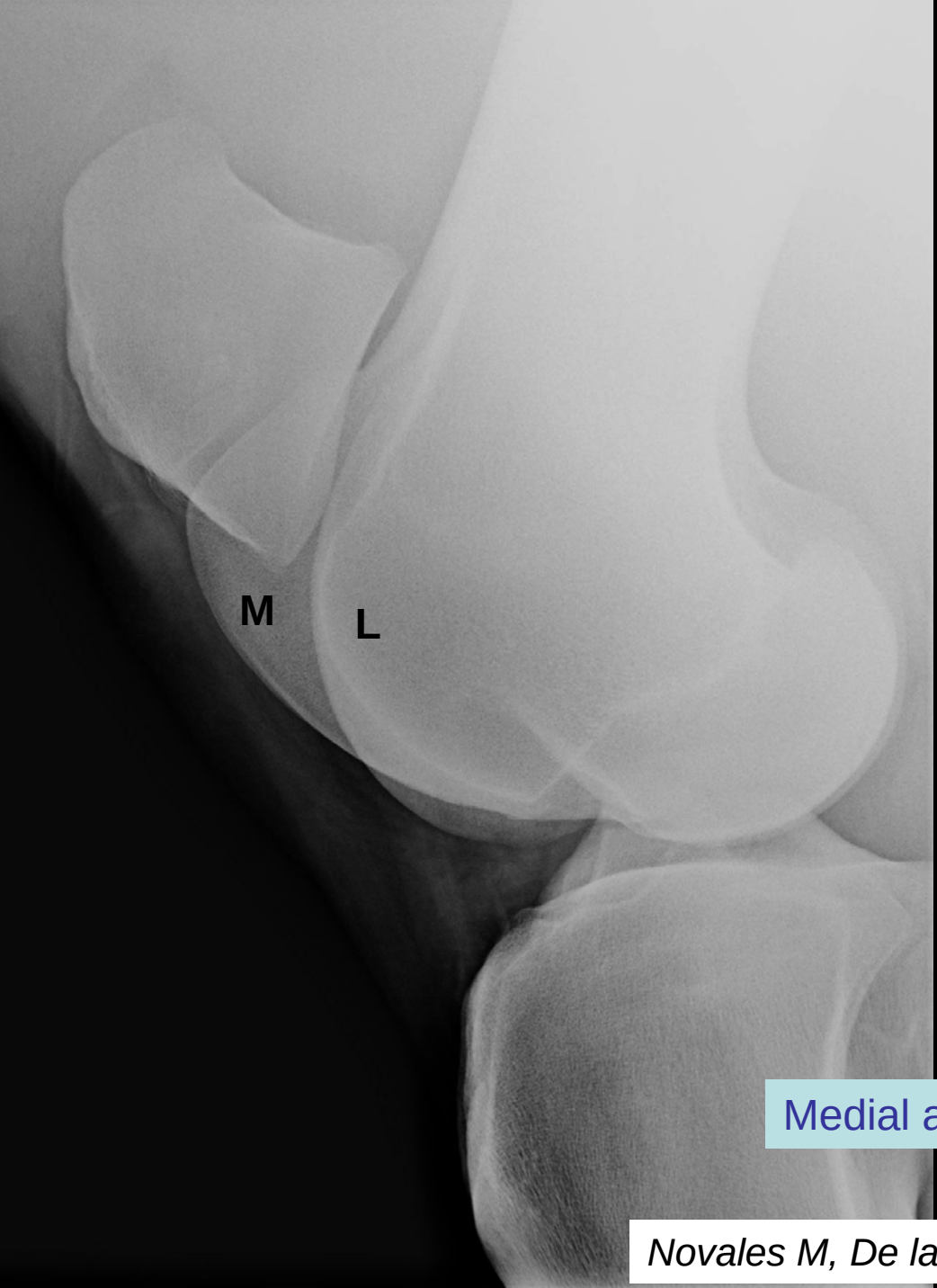
Degree 1.- Smooth or slightly irregular joint surface, without osteochondral fragments.

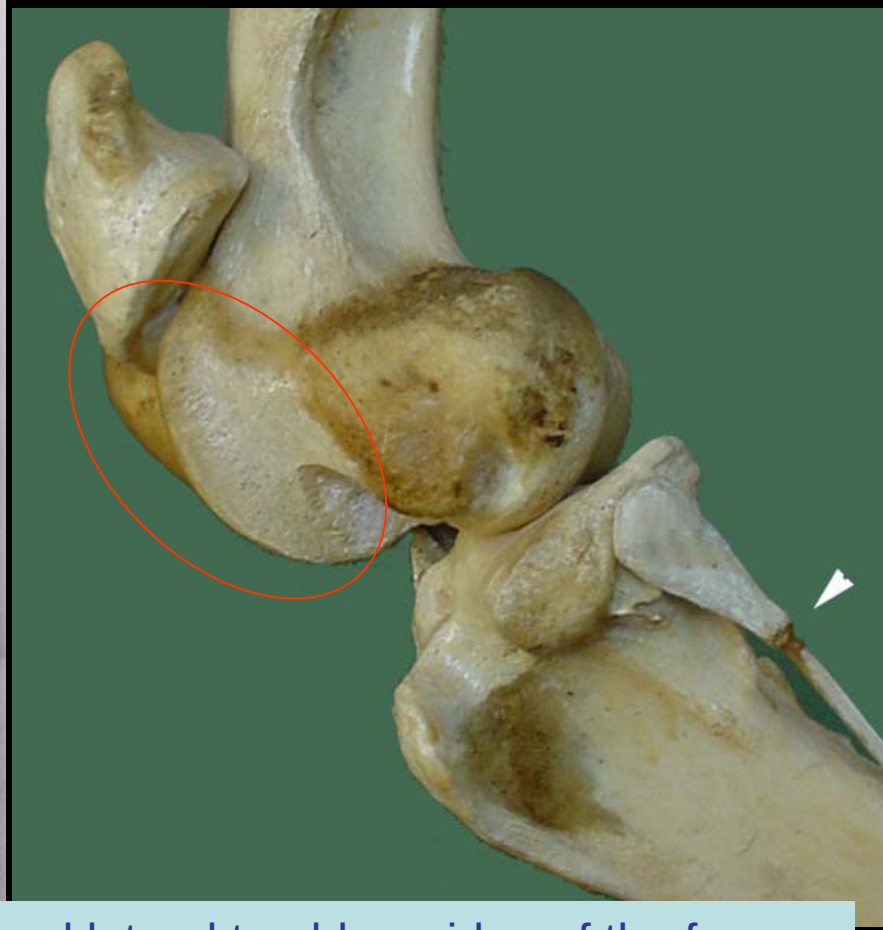
Degree 2.- Flattened joint surface or slightly irregular, but with lysis in the subchondral bone of the trochelar ridge of the femur. Without osteochondral fragments

Degree 3.- Any concavity in the medial or lateral thoclear ridge of the femur. It is possible to find osteochondral fragments.

Novales M, De la Calle J, Prades M, Valdés M. (2008)

ANATOMICAL STRUCTURE





Medial and lateral trochlear ridge of the femur.

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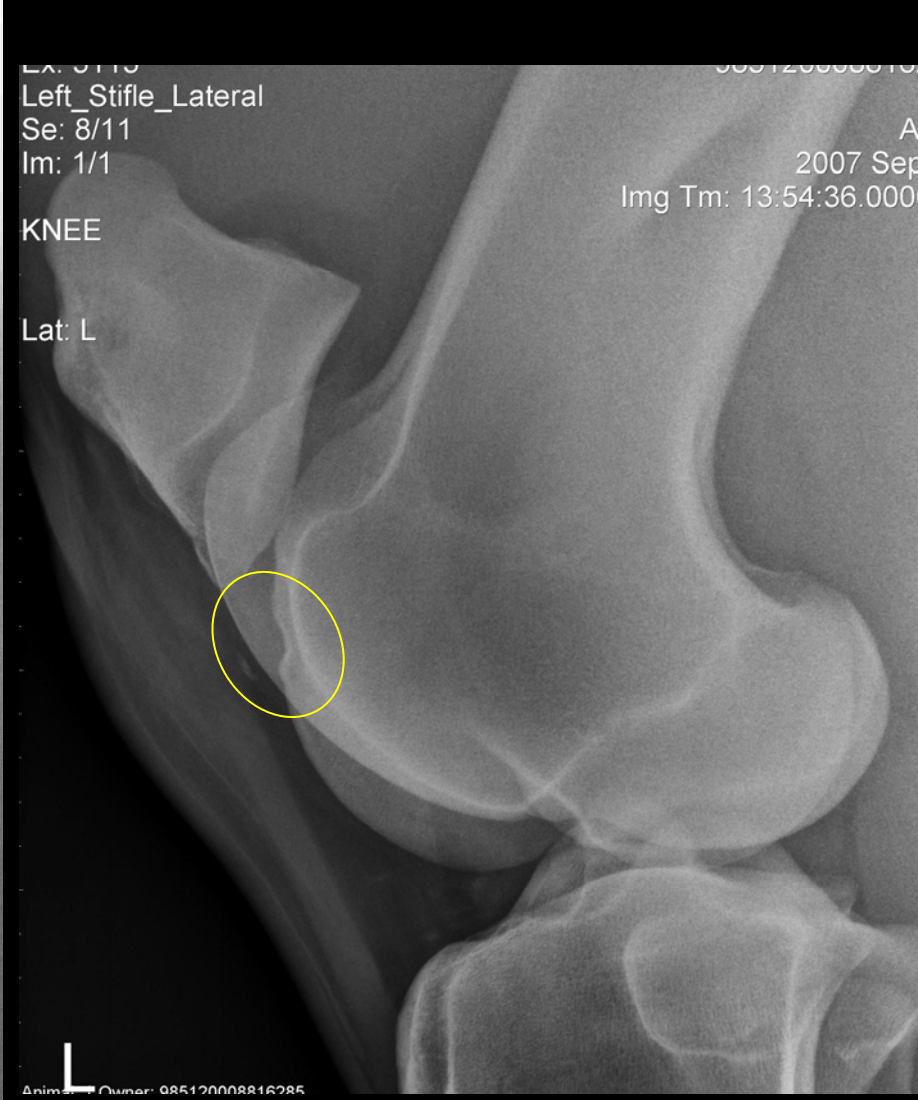
Degree 2



Degree 3

Novales M, De la Calle J, Prades M, Valdés M. (2008)